

PATENT  
Atty. Dkt. No. ROC920030129US1  
MPS Ref. No.: IBMK30129

**IN THE SPECIFICATION:**

Please replace paragraph [0004] with the following amended paragraph:

[0004] Regardless of the particular architecture, in a DBMS, a requesting entity (e.g., an application, the operating system or a user) demands access to a specified database by issuing a database access request. Such requests may include, for instance, simple catalog lookup requests or transactions and combinations of transactions that operate to read, change and add specified records in the database. These requests are made using high-level query languages such as the Structured Query Language (SQL). Illustratively, SQL is used to make interactive queries for getting information from and updating a database such as International Business Machines' (IBM®) DB2®, Microsoft's® SQL Server, and database products from Oracle®, Sybase®, and Computer Associates®. The term "query" denominates a set of commands for retrieving data from a stored database. More generally, queries take the form of a command language that lets programmers and programs select, insert, update, find out the location of data, and so forth.

Please replace paragraph [0005] with the following amended paragraph:

[0005] Often, a query may need to be run against multiple tables to return the desired data. This is the case, for example, when data resides in more than one database (i.e., located on more than one database server). For example, a patient's records (diagnosis, treatment, etc.) may be stored in one database, while clinical trial information relating to a drug used to treat the patient may be stored in another database. Therefore, to access the data, a federated query may be generated that targets each of these distinct databases. As used herein, the term federated query generally refers to any query that requires combining results of queries run against distinct databases. The operation by which this is accomplished is referred to herein as a combinatorial statement. By way of example, combinatorial statements include such statements as the family of JOIN statements (including INNER, OUTER, LEFT and RIGHT), the family of UNION statements. The JOIN pairs up data from two different tables or from the same table. UNION can operate on two identical tables or be used to concatenate data from similar fields of interest. For example, a field-~~names~~ named

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ADDRESS can be UNIONED with a field named LOCATION. These fields are not identical and may be or may not be from the same table, but they contain similar information. By way of illustration, Tables I and II shows an example of SQL statements in which tables are JOINed and UNIONed respectively.

Please replace paragraph [0008] with the following amended paragraph:

[0008] Conventionally, users are required to create query statements with an understanding of the underlying physical data in order to apply the proper combinatorial statements in a manner that returns the desired results. However, this places a significant burden on the user and limits access to ~~ae~~ users having sufficient expertise.

Please replace paragraph [0050] with the following amended paragraph:

[0050] The memory 132 further includes one or more applications 140 and an abstract query interface 146. The applications 140 and the abstract query interface 146 are software products comprising a plurality of instructions that are resident at various times in various memory and storage devices in the computer system 100. When read and executed by one or more processors 130 in the server 104, the applications 140 and the abstract query interface 146 cause the computer system 100 to perform the steps necessary to execute steps or elements embodying the various aspects of the invention. The applications 140 (and more generally, any requesting entity, including the operating system 138 and, at the highest level, users) issue queries against a database. Illustrative sources against which queries may be issued include local databases 1561...156N, and remote databases 1571...157N, collectively referred to as database(s) 156-157[D]]. Illustratively, the databases 156 are shown as part of a database management system (DBMS) 154 in storage 134. More generally, as used herein, the term "databases" refers to any collection of data regardless of the particular physical representation. By way of illustration, the databases 156-157 may be organized according to a relational schema (accessible by SQL queries) or according to an XML schema (accessible by XML queries). However, the invention is not limited to a particular schema and contemplates extension to schemas presently unknown. As used herein, the term "schema" generically refers to a particular arrangement of data which is described by a data repository abstraction 148.